

4 a solderable surface formed on said substantially rigid member, said
5 solderable surface being of a configuration selected from the group consisting of a
6 through-hole, a pin having a substantially uniform-diametered body, or a threaded
7 screw.

1 28. (Twice Amended) The image sensor subassembly of claim 26, wherein
2 said solderable surface is in the configuration of a substantially uniform-diametered
3 pin.

1 29. (Twice Amended) The image sensor subassembly of claim 26, wherein
2 said solderable surface is in the configuration of a pin having a substantially
3 uniform-diametered body.

1 32. (Twice Amended) An optical subassembly comprising:
2 a substantially rigid member;
3 an optical element disposed on said substantially rigid member; and
4 a solderable surface formed on said substantially rigid member, said
5 solderable surface being of a configuration selected from the group consisting of a
6 through-hole, a pin having a substantially uniform-diametered body, or threaded
7 screw.

1 34. (Twice Amended) The optical subassembly of claim 32, wherein said
2 solderable surface is made in the configuration a through-hole.

1 35. (Twice Amended) The optical subassembly of claim 33, wherein said
2 solderable surface is in the configuration of a pin having a substantially uniform-
3 diameter body.

1 46. (Amended) A method for making an optical and image sensor assembly,
2 said and image sensor assembly comprising an optical image sensor subassembly
3 and an image sensor subassembly, said method comprising the steps of:
4 aligning said optical subassembly and said image sensor subassembly

5 relative to one another without contacting said optical subassembly and said image
6 sensor subassembly against one another in a manner that prevents free movement of
7 said assemblies relative to one another in either of the x direction or y directions;
8 and
9 when said optical subassembly and said image sensor assembly are properly
10 aligned, securing said optical subassembly and said image sensor subassembly
11 together.

Please add new claims 80-108 as follows:

1 80. The method of claim 8, wherein said pin comprises a substantially
2 uniform-diameter.

1 81. The method of claim 10, wherein said hole is a through-hole.

1 82. The method of claim 1, wherein there is further no contact between said
2 subassemblies which prevents free relative movement between said assemblies in a
3 z-direction.

1 83. The method of claim 13, wherein said subassemblies are further
2 configured to be freely moved in the z-direction immediately prior to said soldering
3 step.

1 84. The method of claim 19, wherein said pin is of a substantially uniform-
2 diameter.

1 85. The method of claim 21, wherein said hole is a through-hole.

1 86. The method of claim 46, aligning step further includes the step of
2 moving said subassemblies without contact in a manner that prevents free movement
3 of said subassemblies in a z-direction.

1 87. The method of claim 52, wherein said pin has a substantially uniform-
2 diameter body.

1 88. The method of claim 55, wherein said hole is a through-hole.

1 89. The method of claim 63, wherein a hole is a through-hole.

1 90. The method of claim 64, wherein said pin comprises a substantially
2 uniform-diameter body.

1 91. The device of claim 70, wherein said hole is through-hole.

1 92. The device of claim 71, wherein said pin has substantially uniform-
2 diametered body.

1 93. The device of claim 73, wherein said hole is a through-hole.

1 94. The device of claim 78, wherein said pin comprises a substantially
2 uniform-diametered body.

1 95. A method for mounting an optical subassembly of an optical reading or
2 imaging device to an image sensor subassembly of an optical reading or imaging
3 device, said method comprising the steps of:
4 moving said optical subassembly and said image sensor subassembly in
5 proximity with one another;
6 aligning said optical subassembly with said image sensor subassembly; and
7 without a component part of said image sensor subassembly being in contact
8 with a component part of said optical subassembly, soldering said optical and image
9 sensor assemblies together using a solder material.

1 96. The method of claim 95, further comprising the step of forming a
2 solderable surface on at least one of said optical subassemblies or said image sensor
3 subassemblies.

1 97. The method of claim 95, further comprising the step of forming a
2 solderable surface on at least one of said optical subassemblies or said image sensor
3 subassemblies, wherein said forming step includes the step of overmolding non-
4 solderable material onto solderable material to form said solderable surface.

1 98. The method of claim 95, further comprising the step of forming a
2 solderable surface on at least one of said optical or image sensor subassemblies,
3 wherein said forming step includes the step of plating a solderable material onto a
4 non-solderable material.

1 99. The method of claim 95, further comprising the step of forming a
2 solderable material on at least one of said optical or image sensor subassemblies,
3 wherein said forming step includes the step of insert molding solderable material in
4 non-solderable material.

1 100. The method of claim 95, further comprising the step of forming a
2 solderable surface on said optical subassembly, wherein said forming step includes
3 the step of making a frame for said optical subassembly comprising essentially
4 solderable material.

1 101. The method of claim 95, further comprising the step of forming a
2 solderable surface on at least one of said optical subassemblies or said image sensor
3 subassemblies, wherein said forming step includes the step of making said
4 solderable surface in an irregular configuration having an increased surface area per
5 unit three dimensional space relative to that of a smooth surface.

1 102. The method of claim 101, wherein said at least one solderable surface
2 is in the configuration of a pin.

1 103. The method of claim 101, wherein said at least one solderable surface
2 is in the configuration of a pin having a substantially uniform-diametered body.

1 104. The method of claim 95, when said at least one solderable surface is in
2 the configuration of a threaded screw.

1 105. The method of claim 101, wherein said at least one solderable surface
2 is in the configuration of a hole.

1 106. The method of claim 101, wherein said at least one solderable surface
2 is in the configuration of a through-hole.

1 107. The method of claim 95, further comprising the step of forming a first
2 solderable surface on one of said subassemblies and a second solderable surface in
3 said other of said subassemblies, wherein said first solderable surface is in made in
4 the configuration of a pin having a substantially uniform-diametered body, and said
5 second solderable surface is made in the configuration of a through-hole, wherein
6 said pin body has a diameter smaller than said through-hole to allow positional
7 adjusting of said optical subassembly relative to said image sensor subassembly.

1 108. The method of claim 95, further comprising the steps of forming a
2 solderable pin on one of said subassemblies, and making a through-hole for
3 receiving said pin on the remaining of said subassemblies.

REMARKS

Claims 1-37 and 45-79 stand rejected under 35 U.S.C. § 102 or under 35 U.S.C. § 103 over U.S. Patent No. 5,902,997 to Kropp et al. (Kropp), U.S. Patent No. 5,155,401 to Kenaya, et al. (Kenaya) or U.S. Patent No. 5,753,908 to Christensen (Christensen) or based on a combination of the above references.

Applicants have amended some claims to clarify and better set forth the invention, have added claims, and believe the application is now in condition for allowance. The amendments presented herein were not presented earlier since it was